USE OF THE EMERGENCY DEPARTMENT FOR NONURGENT CARE DURING REGULAR BUSINESS HOURS

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Abstract • Résumé

Objective: To characterize the patient population seeking care for nonurgent medical problems at an emergency department during regular business hours and to determine why these patients chose the emergency department over alternative care sites.

Design: Patient survey (self-administered questionnaire).

Setting: Emergency department at a tertiary care hospital in Montreal.

Patients: All ambulatory patients presenting on weekdays between 8 am and 5 pm from Nov. 10 to Dec. 8, 1993, whose condition was determined to be nonurgent. Eligible patients had to be residents of Montreal who did not have a pre-arranged consultation at the emergency department. Of 202 consecutive eligible patients, 200 agreed to participate.

Outcome measures: Description of events leading to the visit, including possible attempts by patients to contact their regular physician; patients' knowledge of alternative care options such as provincial CLSCs (centres locaux des services communautaires) and private walk-in clinics.

Results: Of the 200 patients 152 (76%) stated that they had not visited an emergency department within the previous month, and only 10 (5%) stated that they were in extreme pain. At least 70% were aware of alternative care options; however, 120 (60%) felt that the emergency department was the best place for them to receive care for their medical problem. In all, 81 patients (40%) were referred to the emergency department; 62 (77%) were referred by a health care professional, 46 (57%) by a physician.

Conclusion: Most patients are aware of alternatives to the emergency department for care of nonurgent medical problems. Nevertheless, a large number are being referred to the emergency department during regular business hours by health care professionals. This inefficient use of expensive hospital resources requires further investigation.

Objectif : Décrire la population de patients qui demandent des soins pour des problèmes médicaux non urgents à un service d'urgence au cours des heures normales d'activité et déterminer pourquoi ces patients ont choisi le service d'urgence plutôt que d'autres lieux de soins.

Conception : Sondage auprès des patients (questionnaire à remplir soi-même).

Contexte : Service d'urgence d'un hôpital de soins tertiaires de Montréal.

Patients : Tous les patients ambulatoires qui se sont présentés en semaine entre 8 h et 17 h, du 10 nov. au 8 déc. 1993, dont l'état a été jugé non urgent. Les patients admissibles devaient être résidents de Montréal et ne pas avoir pris rendez-vous à l'avance au service d'urgence. Sur 202 patients consécutifs, 200 ont consenti à participer à l'étude.

Mesures des résultats : Description des événements à l'origine de la visite, y compris tentatives possibles des patients de communiquer avec leur médecin régulier; connaissance par les patients d'autres modes de soins comme les CLSC (les centres locaux de services communautaires) de la province et les cliniques privées de consultation sans rendez-vous.

Résultats : Sur les 200 patients, 152 (76 %) ont déclaré ne pas s'être rendus à un service d'urgence le mois précédent et 10 (5 %) seulement ont déclaré être en proie à des douleurs vives. Au moins 70 % con-

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naissaient d'autres modes de soins, mais 120 (60 %) étaient d'avis que le service d'urgence était le meilleur endroit où faire traiter leur problème médical. Au total, 81 patients (40 %) avaient été envoyés au service d'urgence (62 [77 %] par un professionnel de la santé et 46 [57 %] par un médecin).

Conclusion : La plupart des patients connaissent d'autres moyens que le service d'urgence pour faire traiter des problèmes médicaux non urgents. Néanmoins, beaucoup d'entre eux sont envoyés au service d'urgence au cours des heures normales d'activité par des professionnels de la santé. Il faut enquêter plus à fond sur cette utilisation inefficiente de ressources hospitalières coûteuses.

Use of emergency departments for nonurgent care poses a serious financial and public health problem for Canada's health care system.[1] Such use by patients as a usual source of care has greatly increased since the introduction of universal health care.[2] In some emergency departments more than one third of all visits have been classified as nonurgent, contributing to overcrowding.[3-5] Treatment of nonurgent conditions in the emergency department, although perhaps profitable for hospitals,[6] appears to be much more costly than in other ambulatory care settings[7,8] and often involves long waits and poor follow-up care.[9-12]

In Montreal, patients with nonurgent medical problems have numerous ambulatory care sites available to them. In addition to their physician's office, patients can present at local walk-in clinics without an appointment. Also, the provincial government has set up clinics (centres locaux des services communautaires [CLSCs]) at subway stops and other accessible locations that offer physician-delivered care for nonurgent medical problems as well as a variety of social and public health services. Patients requiring treatment at a CLSC do not require an appointment.

Given the availability of facilities designed to treat nonurgent medical problems of ambulatory patients efficiently and effectively, we wondered why some of these patients choose to receive care at emergency departments. Previous studies on this topic have shown that physician inaccessibility is partially to blame.[13,14] Studies have also shown that the lack of a regular source of primary care may be another factor.[13,15]

We hypothesized that other issues such as unfamiliarity with alternative care options and negative opinions about those alternatives are important factors. We performed this study to characterize the patient population seeking nonurgent care at an emergency department during regular business hours, to understand the sequence of events that bring such patients to the emergency department and to determine why these patients choose the emergency department over alternative sites.

Methods

We performed the study in the emergency department of the Montreal General Hospital, a 600-bed tertiary care hospital serving a predominantly English and French population. The mean number of emergency visits each month is 2600, or about 85 visits per day. The department does not treat pediatric cases.

We included only patients who registered at the emergency department on weekdays between 8 am and 5 pm. We chose these hours because they represent a time when patients have access to the greatest number of care options: physician services, private walk-in clinics and CLSCs.

All ambulatory patients presenting to the Montreal General Hospital's emergency department are interviewed by a triage nurse immediately after registration. The triage nurse classifies each patient for treatment on an established 4-point scale according to the severity of the illness or injury. Code "red" — the most severe category — is for life-threatening conditions that require immediate treatment (e.g., anaphylaxis, respiratory distress and acute heart failure). "Yellow" conditions are those that must be cared for within 1 hour (e.g., acute abdominal pain with severe distress and eye injuries with visual disturbance). The final two categories — "green" and "blue" — are assigned to patients with nonurgent problems (e.g., localized cellulitis, cold or flu symptoms, migraines and joint pain without trauma); these problems are treated after the urgent cases. Patients' codes are not reassessed after initial triage.

Because the focus of this study was nonurgent care, we included only patients whose conditions were coded "blue" or "green." Only ambulatory patients were included because all patients transported by ambulance are brought to an emergency department regardless of their status and so are not free to choose their care sites. We excluded all nonresidents of Montreal because we assumed that they would not be familiar with the alternative care facilities available in the community. Finally, we excluded patients presenting to the emergency department for a pre-arranged consultation with a specific hospital service.

Between Nov. 10 and Dec. 8, 1993, a convenience sample of 200 consecutive patients who met our inclusion criteria were given a questionnaire to complete in the waiting area of the emergency department immediately after triage. The questionnaire was available in either English or French. If a patient was unable to read or write, the questions were read to the patient and the responses recorded by one of us (M.G.B.). Informed con-

sent was obtained orally. After the questionnaire was completed, each patient was asked whether he or she understood all of the questions. To ensure validity, information from the questionnaires was checked against information in the patient's medical chart.

The questionnaire was designed after preliminary surveys and interviews involving test patients. The final questionnaire consisted of three parts. The first part comprised questions to obtain sociodemographic information such as the patients' marital status, level of education, work status and annual household income. The second part dealt with the patients' perceptions of their medical problems, the pain associated with their illness or injury, their familiarity with the health care system and the events that occurred before their visit to the emergency department. Central to this portion of the survey were the patients' relationship with their family physician and their prior use of emergency facilities. The final section of the survey probed patients' opinions about attending walk-in clinics and CLSCs. These questions were included to clarify why these patients chose to come to the emergency department. (Specific information regarding the questionnaire development is available from the authors upon request.)

Data from the surveys were combined with information gathered from the patients' medical charts, including registration and release times and final diagnosis. Each patient's data form was assigned a study number to maintain confidentiality. Descriptive statistics were then tabulated.

Results

On average, 40 patients registered at the emergency department each of the 16 weekdays during the study hours and 12 (30%) were ambulatory patients with a nonurgent triage code. Only 2 of 202 eligible patients declined to participate.

The peak arrival times at the emergency department were 10 am and 1 pm, with a midday decline. The mean amount of time spent per visit (from registration to release) was 4 hours and 55 minutes.

The mean age of the patients was 45 years. Men and women were equally represented, and nearly half of the patients were married (Table 1). Almost two thirds (126 [63%]) of the patients had at least a high-school education. Only 80 (40%) were employed full time or part time, the rest being homemakers, students, retired or unemployed. The economic profile of the patients showed that 79 (40%) had a total household income of less than $20 000 before taxes. For comparison, according to 1991 census data,[16] the average household income in Quebec was $55 000, the unemployment rate in Canada was 10%, and the average age in Canada was 28 years.

The most frequent type of illness and injury responsible for the visit to the emergency department included soft-tissue injury, gastrointestinal symptoms and viral

Table 1: Sociodemographic characteristics of a sample of patients seeking nonurgent care in an urban Montreal emergency department

Characteristic	No. (and %) of patients* *n = 200*
Age group, yr	
16–29	57 (28)
30–49	61 (30)
50–69	59 (30)
69–89	23 (12)
Sex	
Male	104 (52)
Female	96 (48)
Primary language	
English	156 (78)
French	44 (22)
Marital status	
Married	94 (47)
Single	73 (36)
Divorced/separated	15 (8)
Live-in/common law	9 (4)
Widowed	9 (4)
Level of education	
No high school	29 (14)
Some high school	40 (20)
Completed high school	47 (24)
Some college/CEGEP/technical school	25 (12)
Completed college/CEGEP/technical school	10 (5)
Some university	19 (10)
Completed university	25 (12)
No answer	5 (2)
Work status	
Full time	71 (36)
Part time	9 (4)
Unemployed	22 (11)
Retired	30 (15)
Homemaker	39 (20)
Student	29 (14)
Annual household income,† $	
< 20 000	79 (40)
20 000–34 999	51 (26)
35 000–49 999	22 (11)
≥ 50 000	25 (12)
No answer	23 (12)

*Percentages may not total 100 because of rounding.
†Gross income, in Canadian dollars.

syndrome (Table 2). Eight patients were admitted after being examined by a physician; all of these admissions were classified as "elective."

The patients' assessments of their medical problems and the events leading to their visit are summarized in Table 3. A total of 81 (40%) said that they had been referred to the emergency department for their current illness or injury; of these, 62 (77%) were referred by a health care professional. When asked about pain associated with their medical problem 16 (8%) had no pain, and only 10 (5%) were in extreme pain. In all, 124 (62%) had a regular physician. Fifty-three (88%) of 60 who attempted to contact their regular physician before coming to the emergency department were able to do so, and 38 (72%) of the 53 were told to go to the emergency department. When asked how long they would have had to wait to see their regular physician for their illness or injury, 82 (66%) said that they could be treated in less than 1 week; 8 (6%) said that it would take more than 4 weeks. Most (152 [76%]) of the patients had not received care at an emergency department in the previous month.

The patients' knowledge of alternative care sites is summarized in Table 4. A total of 132 patients (66%) did not seek care elsewhere before coming to the emergency department. Over two thirds of the patients knew about CLSCs and private walk-in clinics: 49 (34%) of the 145 who knew about CLSCs regarded them positively, and 12 (8%) had a negative opinion. Similarly, 47 (34%) of the 139 who knew about private walk-in clinics responded positively, and 17 (12%) responded negatively. When asked where they thought the "best" place for them would be to receive care for their current medical complaint, 120 (60%) stated the emergency department and 46 (23%) stated a physician's office.

The principal strength of CLSCs indicated by 29 (59%) of the 49 patients with positive opinions of them was their accessible locations. The principle complaint noted by 9 (75%) of the patients dissatisfied with the CLSC system was that physicians in that setting were felt to be of poor quality. Of the patients who had a positive opinion of walk-in clinics 27 (57%) noted that the principal strength was the short wait for care. Of those with a negative opinion of walk-in clinics 11 (65%) felt that the clinics had poor-quality doctors.

Discussion

Our findings indicate that in general the patients with nonurgent medical problems using emergency services during business hours were middle aged, were not employed, had a regular physician and were aware of the health care services available to them. It was also apparent that the patients' regular physician's office was often

Table 2: Final diagnoses of study patients

Diagnosis	No. (and %) of patients
Orthopedic	
Soft-tissue injury	28
Fracture	9
Degenerative joint disease	7
Inflammatory joint disease	4
Muscle spasm	3
Total	51 (26)
Medical	
Gastrointestinal symptoms	15
Viral syndrome	12
Asthma or bronchitis	5
Pneumonia	3
Cardiac symptoms	3
Diabetes	2
Other	10
Total	50 (25)
Surgical	
Soft-tissue injury	9
Abdominal pain	8
Laceration	5
Surgical infection	3
Hernia	3
Other	2
Total	30 (15)
Neurological	
Headache	6
Peripheral neuropathy	5
Central-nervous-system symptoms	4
Total	15 (8)
Urological	
Infection	6
Renal colic	4
Incontinence	2
Total	12 (6)
Obstetric–gynecological	
Infection	4
Pregnancy	3
Total	7 (4)
Otorhinolaryngological	
Pharyngeal or sinus infection	6
Ear infection	2
Total	8 (4)
Psychiatric	
Depression	3
Other	2
Total	5 (2)
Ophthalmologic	
Impaired vision	2
Other	2
Total	4 (2)
Administrative*	2 (1)
Unknown†	16 (8)

*Work-release forms signed by physician concerning prior injuries.
†Patients did not wait.

Table 3: Patient assessment of illness and events leading to presentation at emergency department

Question/response	No. (and %) of patients*
Did someone refer you to the emergency department?	*n = 200*
Yes	81 (40)
No	102 (51)
No answer	18 (9)
If you were referred, by whom?	*n = 81*
Physician	46 (57)
Nurse	14 (17)
Physician's secretary	8 (10)
Other medical personnel	5 (6)
Social worker	2 (2)
No answer	6 (7)
How painful is your medical complaint?	*n = 200*
Not painful	16 (8)
Mildly painful	30 (15)
Painful	35 (18)
Very painful	29 (14)
Extremely painful	10 (5)
No answer	80 (40)
Do you have a regular physician?	*n = 200*
Yes	124 (62)
No	75 (38)
No answer	1 (1)
If you have a regular physician, did you attempt to contact him or her before coming to the emergency department?	*n = 124*
Yes	60 (48)
No	63 (51)
No answer	1 (1)
How long would you have had to wait for an appointment with your regular physician?	*n = 124*
≤ 1 wk	82 (66)
≤ 2 wk	16 (13)
≤ 3 wk	5 (4)
≤ 4 wk	1 (1)
> 4 wk	8 (6)
No answer	12 (10)
How many times have you been to an emergency department in the last month?	*n = 200*
0	152 (76)
1	26 (13)
2–3	15 (8)
> 3	3 (1)
No answer	4 (2)

*Percentages may not total 100 because of rounding.

contacted before their visit to the emergency department. However, physicians or their secretaries were a common source of referral to the emergency department. Most of the patients stated that the emergency department was the best place for them to receive care, even though the emergency staff, and perhaps the patients themselves, did not believe that the medical problems required rapid care.

The sociodemographic characteristics of the study patients were similar to those of patients presenting to emergency departments for nonurgent care during other times of the day.[17,18]

Our hypothesis that patients seeking nonurgent care

Table 4: Patients' knowledge and opinions about alternative care sites for treatment of nonurgent medical problems

Question/response	No. (and %) of patients*
Do you know what a CLSC† is?	*n = 200*
Yes	145 (73)
No	50 (25)
No answer	5 (3)
If yes, have you ever received care at a CLSC?	*n = 145*
Yes	59 (41)
No	86 (59)
What is your opinion of CLSCs?	*n = 145*
Positive	49 (34)
Neutral	36 (25)
Negative	12 (8)
No opinion	47 (32)
Do you know what a walk-in clinic is?	*n = 200*
Yes	139 (70)
No	48 (24)
No answer	13 (6)
If yes, have you ever received care at a walk-in clinic?	*n = 139*
Yes	82 (59)
No	57 (41)
What is your opinion of walk-in clinics?	*n = 139*
Positive	47 (34)
Neutral	41 (29)
Negative	17 (12)
No opinion	34 (24)
Where do you think the best place is for you to be seeking care for this particular illness or injury?	*n = 200*
Emergency department	120 (60)
Physician's office	46 (23)
Other medical facility	17 (9)
No answer	17 (9)

*Percentages may not total 100 because of rounding.
†CLSC = centre local de services communautaires.

in an emergency department are not well informed about the health care system and the primary care services available to them was not supported by our findings: 62% of the patients had a regular physician and nearly 75% were familiar with CLSCs and walk-in clinics. This has also been reported among patients in Ontario.

Lack of access to medical care did not seem to be a factor in our patients' decisions to present to the emergency department: 66% of those with a regular physician said that they could have scheduled an appointment with their physician within 1 week. Furthermore, only a small proportion of patients had a negative opinion of CLSCs and walk-in clinics. This has also been reported among patients in Ontario.[19]

Previous studies have revealed that having a regular source of primary care helps to prevent use of the emergency department for nonurgent care.[14,15] In our study, however, professional referral was an important determinant of nonurgent visits, nearly half of the patients having been referred to the emergency department by a health care professional.

We were unable to examine closely the history of each patient referral, and so it is difficult to determine why health care professionals referred the patients with minor medical problems to the emergency department. Because only 5% of the patients described being in extreme pain, it seems unlikely that the referral occurred because the health care professional was alarmed by the patient's discomfort and thought immediate care was required. In fact, one third of the patients reported that a medical facility other than the emergency department would have been the best place for them to be seeking care for their particular condition. Furthermore, the peak arrival times of 10 am and 1 pm indicate that the patients felt that they could wait until a convenient time midmorning or after lunch.

The main limitation to research on this topic is the lack of a standard measurement to determine the difference between urgent and nonurgent conditions. Patients and health care providers may have differing opinions about the urgency of a particular condition.[20] Although assessment of a patient's medical problem based on triage may differ from assessment based on final diagnosis, triage was used as the defining criterion in our study because it is a more practical measurement of urgency.[11]

Although some have argued that educating patients on the proper use of emergency services will stem the flow of nonurgent visits to emergency departments[9,21] our findings indicate that such singularly focused efforts may be misplaced. In addition to targeting patients, it may be necessary to educate primary caregivers in order to change their referral practices.

The availability of specialized diagnostic equipment, particularly x-ray machines to investigate potential fractures, as in nine of our cases, cannot be overlooked as a factor in decisions to seek care at the emergency department. X-ray machines are not found in most CLSCs in the Montreal area, and their presence in walk-in clinics and physician offices is variable.

Emergency care and nonurgent ambulatory care are inextricably linked and form the cornerstone of a universal-access health care system. Successful management of the link between these two services will yield both better medical care and cost savings. The challenge will be to develop a policy that ensures appropriate use of emergency facilities without dissuading patients with nonurgent medical problems from seeking care. The first step is to understand why patients with nonurgent problems go to the emergency department.

Our findings demonstrate that a substantial proportion of the patients came to the emergency department despite the availability of community-based alternatives. They accepted long waits because they felt that this was the best place for them to receive care. In addition, many of these patients stated that they were simply following their doctor's recommendation to go to the hospital. This inefficient use of expensive hospital-based health care services requires further investigation.

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Conferences continued from page 1343

May 30–31, 1996: Conference for Admitting Personnel

Don Mills, Ont.

Ontario Hospital Association, 150 Ferrand Dr., Don Mills ON M3C 1H6; tel 416 429-2661, fax 416 429-5651

May 30–31, 1996: Faculty Development Workshop — Orientation Workshop for New Faculty

Montreal

Study credits available.

Mrs. Jean McNab, Department of Family Medicine, McGill University, 517 Pine Ave. W, Montreal QC H2W 1S4; tel 514 398-7375

June 2–5, 1996: Health: a Community Challenge — Joint National Conference and Exhibition 1996 (cosponsored by the Canadian College of Health Service Executives and the Canadian Healthcare Association)

Hull, Que.

Conference Secretariat, 17 York St., Ottawa ON K1N 9J6; tel 613 241-8005, fax 613 241-5055

Exhibition and Sponsorship Secretariat, 402–350 Sparks St., Ottawa ON K1R 7S8; tel 613 235-7218 or 800 363-9056, fax 613 235-5451; CCHSE@hpb.hwc.ca

June 3–4, 1996: Leading Edge Disability Management: a Comprehensive Forum for Disability Management Strategies and Solutions

Vancouver

(also being held in Toronto May 27–28, 1996)

Institute for International Research, 1101–60 Bloor St. W, Toronto ON M4W 3B8; tel 416 928-1078, fax 416 928-9613

June 3–7, 1996: Ontario Health Promotion Summer School — Health Promotion: New Agenda, New Partnerships (coordinated by the Centre for Health Promotion)

Toronto

Health Promotion Summer School, Addiction Research Foundation Training and Education, fax 416 595-6644

June 6–8, 1996: North American Stroke Meeting (cosponsored by the Canadian Stroke Society and the Mexican Academy of Neurology)

Colorado Springs, Colo.

Thelma Edwards, director of program development, National Stroke Association, 1000–8480 E Orchard Rd., Englewood CO 80111-5015; tel 303 771-1700, ext. 20, fax 303 771-1886

June 6–8, 1996: Quality of Life: an International Conference for Families and Professionals on Developmental and Related Disabilities

Toronto

Quality of Life Conference—Surrey Place Centre, c/o Continuing Medical Education, University of Toronto, Faculty of Medicine, Rm. 121, 150 College St., Toronto ON M5S 1A8; tel 416 978-2719, fax 416 971-2200; a.lind@utoronto.ca

June 6–9, 1996: General Practice Psychotherapy Association 9th Annual Educational Conference : Developing Psychotherapy Skills for Use in General Practice

Mississauga, Ont.

Dr. Greg Dubord, chairman, 1996 General Practice Psychotherapy Association Educational Conference, PO Box 225, First Canadian Place, Toronto ON M5X 1B5; tel 416 391-4040, fax 416 203-6585

June 7–8, 1996: The Hastings Center General Meeting Honoring Daniel Callahan

Tarrytown, NY

Hastings Center, 255 Elm Rd., Briarcliff Manor NY 10510; tel 914 762-8500, fax 914 762-2124

June 8–11, 1996: American Diabetes Association 56th Annual Meeting and Scientific Sessions

San Francisco

Meeting Services Department, American Diabetes Association, 1660 Duke St., Alexandria VA 22314; tel 800 232-3472, ext 2453 or 2330; fax 703 683-1351; meetings @diabetes.org

June 9–13, 1996: Canadian Association of Radiologists 59th Annual Meeting

Vancouver

Canadian Association of Radiologists, 510–5101 Buchan St., Montreal QC H4P 2R9; tel 514 738-3111, fax 514 738-5199

Du 9 au 13 juin 1996 : 59e assemblée annuelle de l'Association canadienne des radiologistes

Vancouver

Association canadienne des radiologistes, 510–5101, rue Buchan, Montréal QC H4P 2R9; tél 514 738-3111, fax 514 738-5199

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